

(PCT Article 36 and Rule 70)

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/005904

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-15 \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1-16 \_\_\_\_\_ received by this Authority on 11.02.2005 with letter
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- sheets 1/2-2/2 \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	9, 11-15	YES
	Claims	1-8, 10, 16	NO
Inventive step (IS)	Claims	9, 11-15	YES
	Claims	1-8, 10, 16	NO
Industrial applicability (IA)	Claims	1-16	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

1 This report makes reference to the following documents:

D1: FR-A-1 251 296 (BATIGNOLLES CHATILLON)  
20 January 1961 (1961-01-20)

D2: US-A-2 816 420 (WALSH JOSEPH H) 17 December  
1957 (1957-12-17)

D3: DE 35 36 563 A (ZAHNRADFABRIK  
FRIEDRICHSHAFEN) 30 April 1986 (1986-04-30)

D4: US-A-4 367 803 (WITTREN RICHARD A) 11 January  
1983 (1983-01-11)

D5: US-A-3370422 - introduced following  
establishment of the search report

D6: US-A-3554312 - introduced following  
establishment of the search report

## 2 INDEPENDENT CLAIM 1

The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 lacks novelty (PCT Article 33(2)).

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Document D1 discloses (the references between parentheses refer to that document):

a hydraulic vehicle steering system comprising at least two steering cylinders (5, 6), in which cylinder pistons (11, 12) can be displaced, the positions of which set the steering angle of the wheels (17, 18), each piston (11, 12) dividing the steering cylinder (5, 6) into two pressure chambers, and comprising a first hydraulic pump (1), which can be adjusted with respect to the swept volume and the first connection (2) of which is connected to one of the pressure chambers of the first (7) and second (9) steering cylinders, depending on the steering direction, the second connection (3) of the hydraulic pump (1) being connected to the other pressure chamber of the first (8) and second (10) steering cylinders.

The subject matter of the independent claim thus lacks novelty over D1.

The subject matter of claim 1 also lacks novelty over D4 - see the passages cited in the search report.

The subsequently introduced documents, D5 (see, e.g., figs. 1-3) and D6 (see, e.g., fig. 3), also disclose the subject matter of claim 1 in a manner that is prejudicial to novelty.

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3	<p>DEPENDENT CLAIMS 2-8, 10, 16</p> <p>Claims 2-8, 10 and 16 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT requirements for <b>novelty</b> in relation to D1, D5 or D6 taken alone (<i>for each of claims 2-5</i>) and in relation to D5, figs. 1-3 (<i>for the newly submitted claim 16</i>) and for <b>inventive step</b> in relation to D1 (or D5 or D6) and D2 or in relation to D1 (or D5 or D6) and D3 (<i>for claims 6-8 and 10</i>). Compare, for example, the passages cited in the search report and figures 1-3 in D5 and figure 3 in D6 (PCT Article 33(1) to (3) and (6)).</p>
4	<p>DEPENDENT CLAIMS 9, 11-15</p> <p>The combinations of features contained in dependent claims 9 and 11-15 are neither disclosed nor suggested by the available prior art (D1-D4):</p> <p>Specifically, the use of a second hydraulic pump for hydraulically controlling the first hydraulic pump in line with the displacement of a steering component is neither disclosed nor suggested in this feature combination by the prior art (compare specifically with D4, figure 1).</p>

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## Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The following points appear to be vague and undefined and as such render the scope of the claim in question unclear; furthermore, the exact meaning thereof is not sufficiently disclosed by the description; claims 3, 4, 6 and 11 therefore fail to meet the requirements of PCT Articles 5 and 6:

Claims 3, 4:

It is not clear from the wording of claims 3 and 4 how the pump is intended to work; it appears as if it is intended that the pump is not a suction pump, but merely a pressure pump; the "two quadrant operation" was interpreted to mean: the direction of displacement and the swept volume are dependent on the steering direction and angle, respectively.

Claim 6:

Claim 6 should include a definition of the function of the control valve in terms of its technical features.

"... a control valve" was interpreted to mean a two-way (not inventive in relation to D3, reference 43) or a multi-way control valve.